

▲ The **triglycerides** "tri, because it contains 3 fatty acids", are in the small intestine cavity, and ready to be absorbed

▲ Triglycerides combine with **bile salts** in order to make small balls called "**micelles**"

So, basically micelles are:

(a) fatty acids. (b) glycerol. (c) Bile salts

▲ **Micelles** move to the "brush border", where the micelle'll dissociate into its original components.

The fatty acids & glycerol will pass through the brush border leaving the **bile salts** on the surface "in the small intestine".

▲ Inside the brush border the fatty acids & glycerol will combine again, this combination gives "**FAT**" inside the epithelium, fatty acids with glycerol get inside the rough endoplasmic reticulum "Inside the intestinal epithelial cells" to be covered then to the **Golgi bodies** & associate with a specific protein, with cholesterol they all together make (form) "**Chylomicrons**".

▲ **Chylomicrons** are very large balls, so they can't be absorbed directly by the blood to the "**Hepatic Portal vein**" → <sup>the</sup> liver like the other digested materials. "In the villi" **chylomicrons** will move through the lower wall of epithelium by "bulk transport" to the lacteal "**special lymphatic vessel** for escaped molecules & **chylomicrons**".

▲ **Lacteal** takes the **chylomicrons** to the ("**Thoracic duct**") then to the "Right atrium → ~~the~~ right ventricle" in the blood circulation to "the left atrium → left ventricle" then to the **Aorta**.

▲ Blood travels to the whole body, **chylomicrons** can't enter the cells with this dimension, So "Lipoprotein lipase"

- Enzyme in the blood - will break the **chylomicrons** down and gives: protein, **cholesterol**, **3 fatty acids** & **glycerol**

▲ the **3 fatty acids** & **glycerol** will be transferred by blood to the cells, where they combine again and form **triglyceride**.

▲ Inside the cells, an enzyme called [**cellular lipase**] break the triglyceride or "fat" to **fatty acids** & **glycerol**, "and that was the last step of the fat's absorption" =)